

Optima Bold Headline

Designing Six Ages, a Storytelling Strategy Game



Six Ages

- Optima 32 body

This slide tests fonts,
margins, and aspect ratio

#

Warm up voice
I am excited



Designing Six Ages, a Storytelling Strategy Game

David Dunham
A Sharp, LLC

GDC

Warm up voice

indie game I made with Robin Laws and a talented team

What Is Six Ages?

King of Dragon Pass-like



#GDC19

Rogue-like or Metroidvanias
genre of 2 games, so what makes them unique?

What Is Six Ages?

- Civilization × Choose Your Own Adventure
- “It’s like they took the best parts of Civilization games and combined them with the best part of Choose Your Own Adventure style game books.” [Eli Hodapp, TouchArcade]

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(but since people have written about KoDP)

TouchArcade isn’t wrong. The game **does** combine narrative and a turn-based economic game. And tries to do things that neither genre alone can handle.

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What Is Six Ages?

“It’s a strategy book. I love it.”
[Connor Findlay]

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(actually a review of KoDP)

What Six Ages Is



Strategy

Book

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You guide a small Rider clan, rather than play any one individual

Recently migrated because the Gods War buried your old empire under a glacier

“Core loop” is TBS action which takes time, event

The strategy game is a skeleton that we can add stories to

So that’s what it is — will talk about how it works and how it’s unique

Strategy

- It's all about cows



#GDC19

Unlike Civilization it's all about cows
actually a few other resources. But...

Strategy

- It's all about cows



goods
herds
horses
magic



#GDC19

Unlike Civilization it's all about cows
actually a few other resources. But...

Strategy

- It's **really** all about relationships



#GDC19

Your relationships with other clans are as important as economic resources

You can go to war but

Really unlike Civilization because you cannot conquer all your neighbors

influence relations through actions like Emissary, but also through story decisions

Strategy

- It's **really** all about relationships

promise	raidHistory
captivesHeldByUs	raidsLost
favoursOwedUs	raidsUnanswered
fearsUs	raidsWeNeedToAnswer
haveAlliance	raidsWon
haveFeud	ritualSupport
haveTrade	slights
isClose	tributeFood
isNeighbor	tributeGoods
knowledge	tributeHerds
likesUs	tributeHorses
losses	visitsByCaravan
ourClanCaptives	visitsByEmissary

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lots of values tracked!

note that favor is a currency

Book

- Over 400 interactive scenes



scenes have 4-5 responses

not CYOA (usually no direct connection). Closest (in IF lingo) is Sam Kabo Ashwell’s “floating module” because there is no single story line but with intention: they have context, e.g. clans might be chosen to intensify the stakes

You’ll see the rootless Riders again

dramatic & emotionally satisfying conclusion

not in a row! (> first 4 Harry Potter novels) because of replayability

Book

- Over 400 interactive scenes
- “Floating modules”
- Connected by political/economic model



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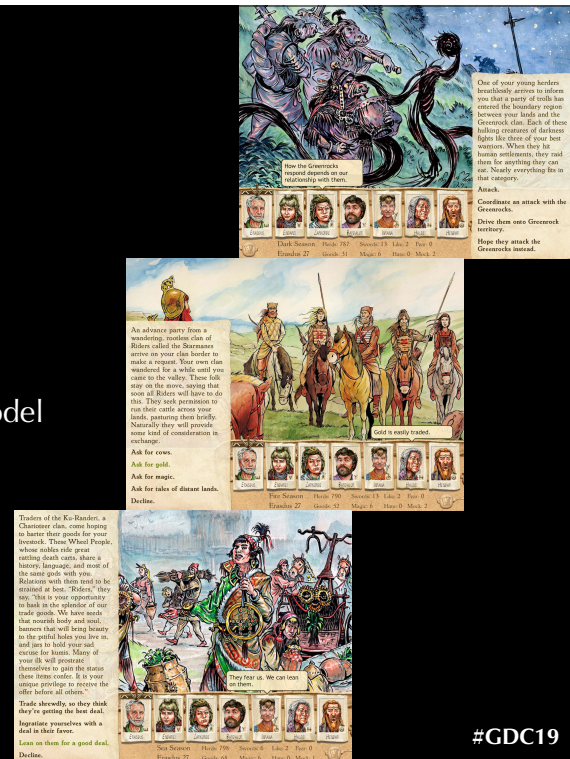
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- Multi-year story lines
- Overall story arc



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- “Floating modules”
- Connected by political/economic model
- Multi-year story lines
- Overall story arc
- Over 472 000 words



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Setting

- Glorantha
- Almost like a character



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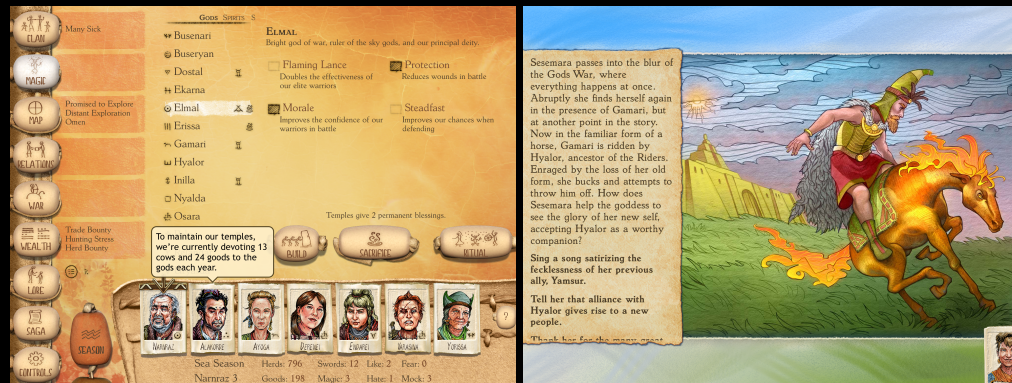
Detailed and realistic world helps give an immersive background to the stories. Think Hogwarts.

Glorantha: a complete world with myths and cultures, as if the background had been playtested (late Greg Stafford began writing over 50 years ago in 1966)

800 page Guide to Glorantha — over 6.3 kg (14 pounds)

(we play in the undefined spaces, largely extrapolating from a few paragraphs)

Setting



Strategy

Book

#GDC19

Glorantha gives conflict: neighbors' main god killed your main god which sets in place your migration as an upstart clan
pantheon of deities provides magic which impacts the economic model (including combat)
Magic is more than just mechanics, it's fuzzy
rituals are myth as playable story, but with fuzzy outcomes

Immersion

- Play the story, not the game



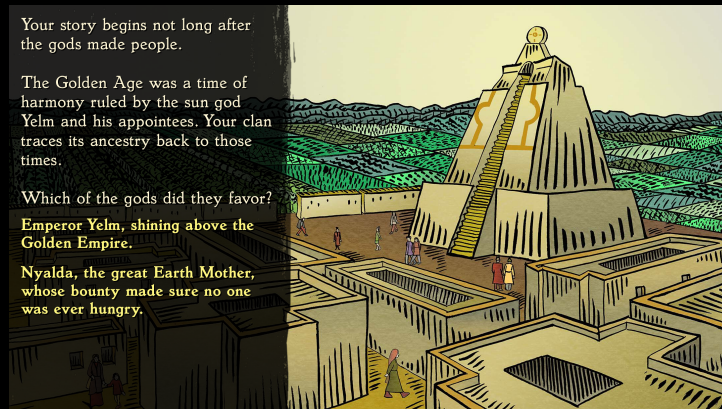
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Reminder:

Goal of immersion: play the story, not the game. We want you to be **in** the setting.
being text-based doesn't mean you can't be immersive!

Knowledge

- Player knows what someone in the world knows
- Questionnaire introduces history



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Greg Stafford genius — present crucial backstory while making it the player's story

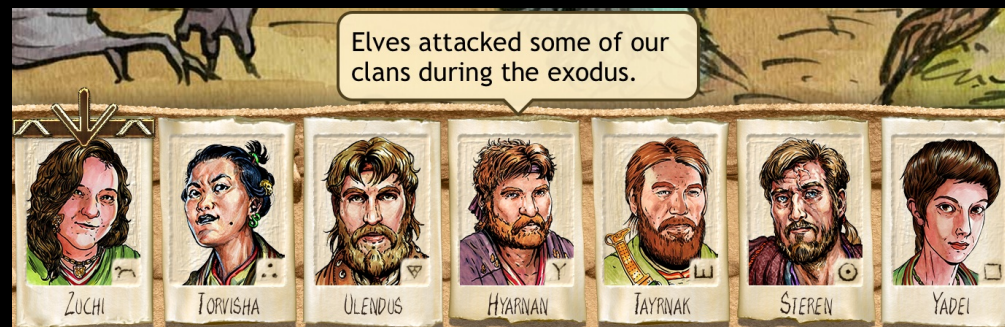
show, don't tell — **do**, don't show

No expository lump

Sort of “character creation,” helps initialize economic model

Knowledge

- Player knows what someone in the world knows
- Advisors



#GDC19

But the player knows less than people in the world. They shouldn't be penalized because they're not Riders.

(we do use a map despite its potential for anachronism — you can see distant peaks)

Leaders have 3 roles: info, playing pieces, immersion (as sympathetic characters)

Because they're key, they're chosen by player

Advisors

- Give in-world information



#GDC19

also remind players to do stuff

Personality makes them more interesting and empathetic

Skill-based advice is higher priority, on the presumption that it's more likely to be what the player would know about the world, and need to know to play

Advisors

- Give in-world information
- Recommend actions



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- Are human — age



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Advisors

- Give in-world information
- Recommend actions
- Are human — age
- Are only human — they can fail
- Are all too human — personalities



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Personality makes them more interesting and empathetic

Skill-based advice is higher priority, on the presumption that it's more likely to be what the player would know about the world, and need to know to play

Advisors

- Advisors have two traits, so they can be noticed
- Generated randomly for replayability
- Only valid combos (w/Religion)

```
bit_AntiRam,  
bit_AntiUndead,  
bit_AntiWheel,  
bit_Arbitrary,  
bit_Arrogant,  
bit_Bloodline,  
bit_Daring,  
bit_Fatalistic,  
bit_Fearful,  
bit_GoatFan,  
bit_GodSeeker,  
bit_GoldenCity,
```

#GDC19

Religion is not a personality trait, but also fleshes out advisors and advice

33 personality traits, plus deities. Many opposed (Miser/Spendthrift, Optimist/Pessimist, Peaceful/Warlike)

~~specific to game — KoDP and the next chapter have a different set~~

Why have personality? drives advice, but more importantly...

Advisors

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- Personality drives advice

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Why have personality? drives advice, but more importantly...

Advisors

- Personality drives action
- Only after you've seen it



```
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bit_GoldenCity,
```

```
[YearsOnRing(GoatFanOnRing) > 2]
```

#GDC19

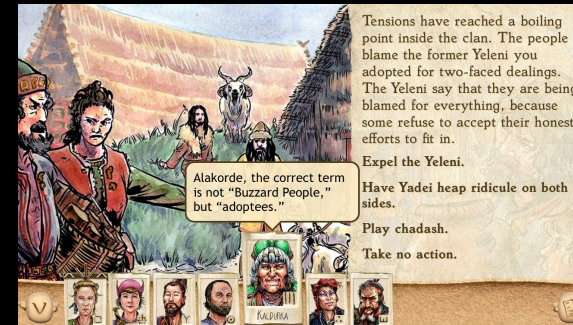
Advisors are people with their own agendas

2 game years; only those you've chosen

Personality can also be a bonus — don't choose a Merciful or Peaceful character to intimidate someone

Advisors

- Advisor vs Advisor



[Relandar Priority] The Buzzard People should try harder to fit in.

[Erissa Priority AND RelandarOnRing] <r>, the correct term is not "Buzzard People," but "adoptees."

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(script sneak preview)

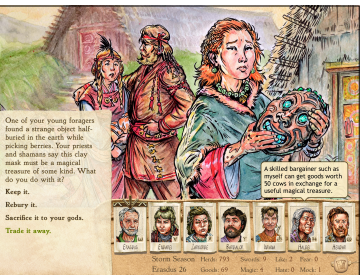
Advice is best writing, probably because it lets us have a viewpoint

Scripts



#GDC19

Let's look behind the scene, at how strategy and story work together



domain-specific, intended for ease of non-technical writer

step through to **ChooseClan** — scenes can have a sequence decisions

convention: assume our Clan dot. **q** i

convention: assume our Clan dot. **q** is degree of success (here minor).

```
[NotFeudingClans(HyaloringClans) ≠ 0] Response 4: Trade it away.
{
  otherClan = ChooseClan("Who do you trade it to?",
    NotFeudingClans(HyaloringClans))
  GainTreasure('ClayMask)
  TransferTreasure(otherClan, 'clayMask)
  saga: We traded it away.
  [otherClan.likesUs > 49] b += 1
  [otherClan.fearsUs > 49] b += 1
  [otherClan.fearsUs ≤ -50] b -= 1
  [.ritualMagic > 1] b += .ritualMagic - 1 # It involves ceremonies
  test Bargaining vs. Customer, modifier: b
  win:
    g = 45 + q * 5 # Note that standardTreasurePrice is 50
    .goods += g
    .mood += 2.5
    otherClan.likesUs += 1
    text: We traded it to the <otherClan> clan for a handsome price—
      goods worth <g> cows.
  lose:
    g = 45 - q * 2
    .goods += g
    text: We traded it to the <otherClan> clan for a less than handsome
      price—goods worth <g> cows.
}
```



#GDC19

Opal Scripting Language (first developed for KoDP)

domain-specific, intended for ease of non-technical writer

note conditional response and list function NotFeudingClans which filters. The language supports the economic model too.

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Procedural Content

- Scenes

#GDC19

Scenes = building blocks of the procedural content. (∃ other scripts including news)
trigger scenes in a story arc (e.g. Antler Society in most games).
conditional response prevents game from intruding on the story — no “what might have been”

Procedural Content

- Scenes

- Conditioned

```
scene: scene_36DwarvesArrive  
[hole = true]
```

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- “When”

```
code: fragment_believerclansWillChange
```

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- Scenes

- Conditioned

```
scene: scene_36DwarvesArrive  
[hole = true]
```

- “When”

```
code: fragment_believerclansWillChange
```

- Consequence

```
trigger news_11aFireKidFate 3
```

#GDC19

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Procedural Content

- Scenes

- Conditioned `scene: scene_36DwarvesArrive`
`[hole = true]`

- “When” `code: fragment_believerclansWillChange`

- Consequence `trigger news_11aFireKidFate 3`

- Only relevant items

- `[.magic > 0] response 2: Draw on clan magic.`

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trigger scenes in a story arc (e.g. Antler Society in most games).

conditional response prevents game from intruding on the story — no “what might have been”

Procedural Content

- Scene Queue
 - Manages time with turn granularity
 - @priority tag breaks ties
 - Scenes can be cancelled (e.g. if a character dies)

#GDC19

a priority queue, granularity is turn (it's turn based strategy)

this is how we add time to the narrative structure (like long story lines)

Handles delayed consequences, expiring bonuses

If nothing is ready to run...

Procedural Content

- Unscripted scenes → emergent narrative
- Never pick a scene that's in the queue
- If repeatable, significant delay before eligible
- @staple, @earlyRepeat tags
- Conditioned
 - [IsCropSeason]
 - [.goods > 12]
 - [GameYear > 14]

#GDC19

key to emergent narrative — most scenes “random”

when nothing is runnable, pick a random one (to balance density of story vs strategy)

stay tuned for more tags

note that scenes may be applicable only during certain times of the year

Procedural Content

- Goal is high replayability
 - Placeholders
 - Alternatives
- ```
<otherClan> emissaries <gift
you/offer a gift of> <lapis
lazuli/fine-grained cedar wood/
brilliant yellow dye/story tent
thread> worth <~g> <cow#cows>.
```

#GDC19

replayability — you don't know what to expect between games (since most scenes repeat rarely)

Generated in pieces, not just a template

Variation avoids an exact stimulus/response. e.g. Ventures repeat but feel less mechanical with alternate text.

Also have <him/her>

Players see patterns (tendency to perceive connections and meaning between unrelated things)

# Procedural Content

- Goal is high replayability
  - Placeholders
    - Alternatives
    - Contextual
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Procedural Content

- Goal is high replayability
- Placeholders
 - Alternatives
 - Contextual
- Everything is contextual → apophenia

```
<otherClan> emissaries <gift  
you/offer a gift of> <lapis  
lazuli/fine-grained cedar wood/  
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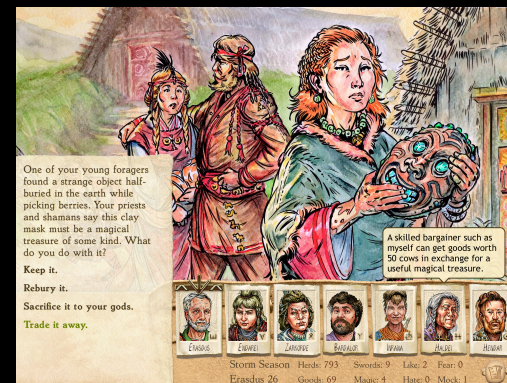
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Tags



@foraging, @treasure, @actOne, @seeded

#GDC19

tags categorize scenes

help integrate story and economy

told author to make them up as needed

Tags

@foraging, @treasure, @actOne, @seeded

- Many relate to bonus

```
BonusForTag(1, "@animals", p,  
  "Spirits we freed gave us luck with animals")  
# +1 on tests in scenes tagged @animals
```

- If a player chooses a spirit-related response we can add @spirits to ensure bonuses
- Some are informational (@actThree, @macropolitics)

#GDC19

135 different tags, attached to scripts. @ just so they stand out.

Great way to solve the problem: what scenes should be affected by a bonus?

@actThree has no game use, but ∃ an act structure; some random scenes are only relevant when the story kicks in
special implementation = check for tag, not scene. Or to handle unit testing

Economics

- Concerns
 - Visible
 - Interesting
 - Stress or Bounty
 - Meaningful



```
Response 2: Have your crafters make it.
{
  # -20% craft productivity next 5 seasons
  AddConcern(1, 'CraftStress', 5, "we're making story fabric")
}
```

#GDC19

Problem: did you notice the consequence?

Turn problems with the economy into something that matters in the story

Quantized modifiers

ensure that consequences have a meaningful impact on the economy, not just a +1%

levels of concern — cumulative

Economics

- Concerns
- Warnings

```
concern_BattleLuck
concern_WarMagicStress
concern_OnAlert
concern_TrainedWarriors
concern_Arrows
concern_FortStress
concern_InsufficientWarriorsWarning
concern_CraftStress
```



#GDC19

Concerns show up in the dashboard and advice
Concerns are usually ongoing
Warnings like being short of warriors

Economics

- Concerns
- Warnings
- Food
- Self-directed

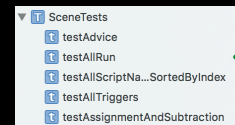


#GDC19

Quantized description: seasons of food vs bushels — less transparent but more useful
 assume people can feed themselves without micromanagement, so
 seasonal cycle makes bean counting hard

Test

- Unit testing



TEST_NO_CHIEF
TEST_NO_GOODS
TEST_NO_WARRIORS
TEST_ALL_HATE
TEST_ALL_SPIRITS_RELEASED

- Exhaustive QA

#GDC19

“logic error” can be the story

Apophenia is a 2-edged sword. Context matters. If the player takes an action that should have some effect — attacking an ally, say — and nothing happens, they’re going to think “They’re only lines of code!”

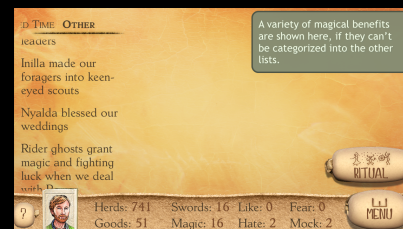
So testing is the final piece of staying immersive (bugs break immersion)

a couple things beyond the usual QA.

QA also tells me what’s missing

Immersion Challenges

- Transparency
- Difficulty
- Consequences



Consequences of “only in world knowledge” approach to immersion

confusion is not immersive

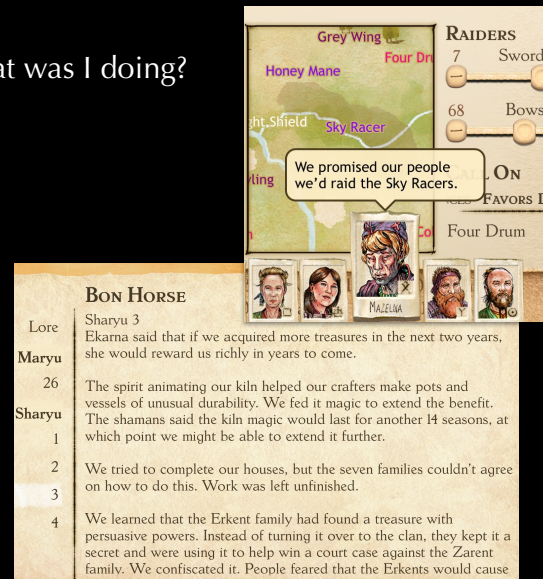
Fallen London shows difficulty % — but they sell micro-content and it's a different story structure

KoDP players complain about “random” failure, we addressed this in Six Ages

Magic screen shows consequences, and also helps with the next challenge...

Immersion Challenges

- Gaps in play — what was I doing?
- Advice
- Saga
- Goal



#GDC19

no levels or arbitrary save points (auto-save)

re-immersion can be a problem. Saga (and advisors).

Plot twist — can't tell player to use the Force to blow up Death Star (King of Dragon Pass had it easy, the title was the goal)

Six Ages

- Story and strategy are equally important
- Keep player immersed — play the story, not the game
- Characters in a multi-generational story
- Emergent narrative
- Domain-specific scripting language
- Concerns help interlink story and economy

#GDC19

pretty much every element supports both

Advisors are a big part of the immersion

although it is a clan-level game, it is personal

procedural narrative exploits apophenia to get even more meaning

Try to do everything in script, or else data-driven (not in C)

**What questions
do you have?**

#GDC19

What questions do you have?

David Dunham
Twitter: @radiofreelunch @SixAges
Email: david@a-sharp.com

#GDC19